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## Patent Abstracts of Japan

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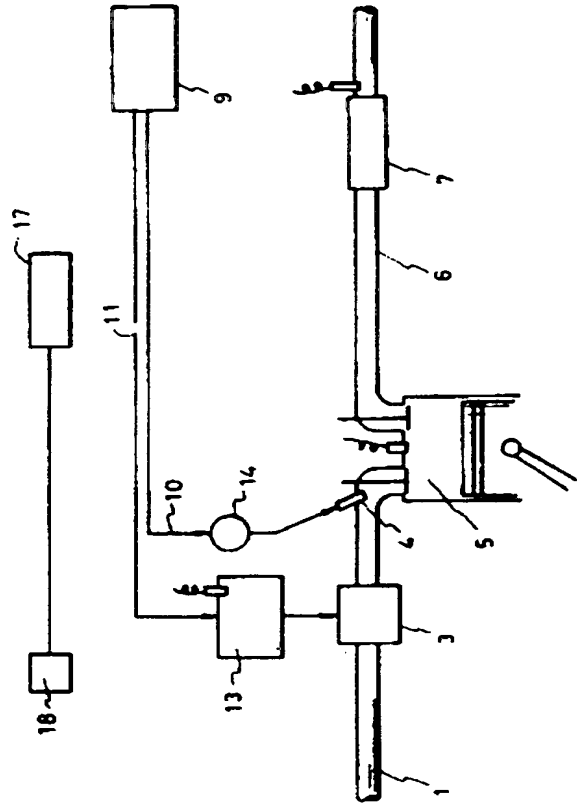
APPLICATION DATE : 17-05-82  
APPLICATION NUMBER : 57081375

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INVENTOR : TAKISHITA TOSHIO;

INT.CL. : F02D 19/06

TITLE : STARTING DEVICE FOR ENGINE  
USING ALCOHOL AS FUEL



ABSTRACT : PURPOSE: To reduce harmful exhaust air without requiring a gas storage apparatus by supplying a part of alcohol by a reformed gas mainly consisting of hydrogen and carbon monoxide upon starting the engine using alcohol as a fuel.

CONSTITUTION: In addition to a main fuel passage 10 leading to a main fuel injection valve 4 through a fuel pump 14, a starting fuel passage 11 leading a starting mixer 3 of a suction pipe 1 through a starting reformer 13, is provided in a fuel tank 9. Upon starting the engine, when a starter switch 18 is turned ON, a control circuit 17 supplies a gaseous mixture consisting of air and alcohol in a combustible range to the reformer 13, and an oxidation heat reaction is caused by a catalyst for reforming and the gaseous mixture is heated up to the activation temperature. Thereafter, alcohol is supplied in excess to generate a reformed gas which is mixed with air in a mixer 3, and supplied to a combustion chamber 5. After warming up the mixture when the temperature of the exhaust catalyst 7 is raised to a predetermined value, liquid alcohol is supplied from the injection valve 4. Accordingly, aldehyde is discharged only in a small quantity.

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